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PROTECTION OF THE ATMOSPHERE

Proposal submitted by the Chairman

Protection of the Atmosphere: Options for Agenda 21

INTRODUCTION

1. The Atmosphere component of Agenda-21 is flexible and evolving. The INC negotiations on climate change address many of the issues contained in the following text. In so far as the following proposals refer to climate related activities discussed by the INC, they should not preempt, duplicate or be interpreted as prejudging the INC negotiations concerning questions that may arise, and be discussed there, such as general objectives and commitments, standards, conditionality, institutional arrangements and mechanisms for funding incremental costs.

2. [Six][Eight] major programme areas are proposed with regard to the protection of the atmosphere, for the relevant sectors - energy, transport and industry, which are major sources of atmospheric pollution. Programme Areas A-C in particular could be organized under the overall heading of "Promoting Environmentally [Safe and] Sound Energy Development". The Programme areas are as follows:

A. PROMOTING THE ENERGY TRANSITION
B. INCREASING ENERGY EFFICIENCY
C. PROMOTING RENEWABLE ENERGY SOURCES
D. PROMOTING ENVIRONMENTALLY SOUND AND SUSTAINABLE TRANSPORT SYSTEMS
[E. PROMOTING INDUSTRIAL DEVELOPMENT THAT DOES NOT ADVERSELY IMPACT THE ATMOSPHERE
F. PROMOTING AGRICULTURAL DEVELOPMENT THAT DOES NOT ADVERSELY IMPACT THE ATMOSPHERE
G. PROMOTING SUSTAINABLE ENERGY CONSUMPTION PATTERNS AND LIFE STYLES
H. ADDRESSING THE UNCERTAINTIES]

{Note: One country suggested that these programme areas should be divided into those dealing with energy consumption on the one hand, and energy production on the other.}

A. Promoting the Energy Transition

Basis for Action

3. Most of the World's energy for human consumption is produced and used

today in unsustainable ways. The World must continually strive for energy development paths that are increasingly sound environmentally. This will require a transition to Environmentally [Safe and] Sound Energy Systems (ESES). Conventional, as well as new and renewable energy sources should be used in ways which respect the environment, subject to the imperative requirements of meeting basic human needs. There is a considerable scope for improvement in all the sectors. The path to increased reliance on environmentally [safe and] sound energy systems must be vigorously pursued.

Objectives

4. The long-term objective is to implement an energy transition from the present polluting and wasteful energy production and consumption patterns, toward one relying on environmentally [safe and] sound energy systems (ESES), increasingly based on efficiency in energy production, transmission and consumption, as well as on the use of renewable sources of energy. Fossil fuels and other conventional energy sources will continue to be important, and consequently it is essential that new developments employ the most efficient and least polluting technologies[, taking into consideration the Capital/Output ratio in the case of developing countries.]

5. Countries should/could set objectives for increasing the contribution of ESES to their energy supply and consumption mix, in particular through the promotion of the development of alternative and less polluting technologies.

6. Developing countries [and countries with economies in transition] will need considerable increases in energy consumption to support economic and social development efforts, even if the most energy efficient technologies are utilized. Increasing the availability of energy supplies in economically and environmentally [safe and] sound ways is a major priority.

7. The energy transition will entail major changes in the patterns of energy production and consumption[, especially in so far as fossil fuels [and nuclear energy] are concerned]. In this context, special consideration will need to be given to developing countries, and economies heavily dependent on the production, exports and/or consumption of fossil fuels, to ensure that the transition does not adversely affect their development, taking into account the rights of each country to choose its own path to the transition. Furthermore, the energy transition should not lead to the promotion of existing or new energy technologies that are unsafe and have significantly more adverse environmental impacts.

8. In order to fulfill the increasing energy requirements of developing countries, and to enable them to make progress on the energy transition, ways and means will need to be identified to ensure funding and technology transfer, consistent with United Nations General Assembly resolution 44/228, with a view to fulfil the objectives of the Conference, in particular those stipulated in Section I, paragraph 15, sections (j) and (k).

9. Activities

a. Energy Supply Development

Recognizing the need for increasing energy supplies in developing countries, developed countries, the relevant UN bodies, inter-governmental organizations, and financial institutions, the private sector as appropriate, should/could cooperate with developing countries to achieve increased energy supplies to support their development efforts, taking into account environmental considerations.

b. Availability of Energy Technologies

Developed countries should/could cooperate with developing countries [and countries with economies in transition] to enable them to acquire or develop the relevant new, technologies, practices and policies.

c. Incorporation of Environmental Costs

Governments, in cooperation with relevant UN Agencies should/could develop mutually agreeable and comparable methodologies and criteria for incorporating the full costs of the environmental impacts caused by the production, transmission and consumption and treatment/disposal of wastes generated, of energy into the price of energy, to facilitate full environmental costing of energy in all countries[, particularly those with high per capita energy consumption levels].

d. Increasing the Contribution of ESES

Countries [with high per capita energy consumption levels] should/could re-examine current energy supply mixes to determine how increased reliance on ESES could be pursued in cost-effective manner, in the light of their unique social, physical, economic and political characteristics. To facilitate this, countries should/could coordinate their energy plans regionally, where applicable. Countries should/could also exchange information on their energy and environment situations in order that all could learn from each other on how to best pursue sustainable energy development.

e. Research Priorities on ESES

Countries and regional economic integration organizations should/could, [to the maximum extent possible, increase their][review priorities for] research and development of ESES. In addition to technology development, energy management practices and policies, barriers to relevant technology transfer and market penetration of technologies, including new ones may need to be examined.

f. Integration of Environment into Energy Decision Making

Governments, at local, regional and international levels, industry as well as the private sector should/could seek to incorporate environmental concerns into their decision making concerning energy production and use.

g. Integrated Energy-environment Planning

Governments and international organizations, with special support from the developed countries should/could cooperate in the development of appropriate methodologies for the making of integrated energy-environment policy decisions. Governments should/could be encouraged to carry out environmental assessments of policy decisions and projects. Such assessments should/could be made widely available, including harmonized inter-country analyses.

h. Education and Awareness

Education and awareness raising programmes at the local, national and international levels concerning energy efficiency, environmentally [safe and] sound energy systems, should/could be introduced or intensified.

i. Information

Countries, in cooperation with the relevant United Nations bodies, international and regional and sub-regional bodies, and NGOs, should/could give priority to strengthening their efforts at collecting, analyzing and disseminating relevant information.

j. Capacity building

Countries, in cooperation with the relevant United Nations bodies and international donors, and NGOs, should/could mobilize technical and financial resources, and facilitate technical cooperation to developing countries [and countries with economies in transition] to reinforce their technical, managerial, planning and administrative capacities to develop, and implement environmentally [safe and] sound energy systems.

[k. Review of Public Financial Institutions

Countries should/could ensure that public financial institutions, at the national and international level, review their programmes to determine the extent to which they are contributing to or promoting investments that encourage the use of environmentally [safe and] sound energy systems, and consequently to better serve environmental and developmental objectives.]

10. Means of Implementation

{The cross-sectoral issues which have a bearing on this programme area will be included under this section following their discussion, for the 4th session of the PrepCom.}

B. INCREASING ENERGY EFFICIENCY

Basis for Action

11. While there are different ways of defining energy efficiency, it is generally accepted that efficiency in the production, transmission and consumption of energy are key areas to support the overall transition to a more sustainable energy future. Options for improving energy efficiency exist with the potential for producing multiple environmental and economic benefits. Where cost effective, such options should/could be pursued. Actions and technologies should be tailored to the unique social economic and political and physical characteristics of each country. Options which are cost effective in developed countries may not be cost effective in developing countries. [Moreover, even cost effective options can be adopted only where the requisite capital resources are available.] [Nonetheless many cost effective actions exist in all countries which can be adopted immediately.]

Objectives

12. Countries and the [EC][regional integration organizations], international and intergovernmental organizations should/could take steps, and cooperate to ensure that energy efficiency and promotion of less energy intensive technologies are undertaken, taking into account the differences between [developed and developing countries][countries at different stages of development] [, and other differing national circumstances].

[13. [Developed] Countries and the [EC][regional integration organizations], [as well as relevant UN and intergovernmental organizations] should/could increase their institutional capacities and policy focus [to support the management of energy demand and, where appropriate, the reduction of fossil fuel use or its growth per unit of output in the major energy using sectors,] in order to increase output per unit of energy input and reduce the environmental impacts per unit activity.]]

14. Countries, and the [EC][regional integration organizations], [international and intergovernmental organizations, [new] international funding mechanisms] should/could endeavour to help the developing countries [and countries with economies in transition] increase their capacity, to enable them to undertake the necessary technical, research, development and adoption measures.

15. Activities

a. Planning for Energy Efficiency

Planning for energy efficiency should/could, as much as possible, be adopted by countries, as well as by the private sectors taking into account regional and sub-regional energy planning, where appropriate. The use of planning for energy efficiency would be encouraged in all sectors, public and private.

b. Pricing and other Economic Mechanisms

Governments, in collaboration with United Nations and other international organizations, and, as appropriate with the private sector should/could examine economic and other policies, which may lead to inefficient energy production and use, [such as the incomplete inclusion of the full costs of the environmental impacts caused by the production, manufacture, transmission and consumption of energy in the energy price], and seek to remove policies leading to inefficient energy use through policy measures available to them.

c. Setting of Energy Efficiency Standards

[Developed]Countries and the [EC][regional integration organizations] should/could strengthen existing and/or create new energy efficiency standards on specific technologies and for economic sectors, as appropriate. These should/could be coordinated at regional levels, where relevant. Such standards should provide ongoing incentives for more efficient energy use, with special attention being paid to the promotion of the development and use of [alternative] and less polluting technologies.

[d. Technical Cooperation on Efficiency Measures

Specific case studies in developing countries could be initiated by INC and other appropriate agencies, on a priority bases, to determine energy consumption patterns, the identifications of areas where energy efficiency improvements are required and the technologies, facilities and cost that are required to improve energy efficiency, bearing in mind the needs to minimize atmospheric emissions.]

e. Availability of Efficient Energy Technologies

Developed countries should/could cooperate with developing countries [and countries with economies in transition] to enable them to acquire or develop the relevant new, energy efficient technologies, practices and policies[, inter alia through meeting incremental costs].

f. Education and Awareness

Education and awareness raising programmes concerning the benefits and applicability of energy efficiency measures at the local, national, regional and international levels should/could be introduced or intensified.

g. Information

Countries, in cooperation with the relevant UN bodies, international and regional and sub-regional bodies, and NGOs, should/could give priority to strengthening their efforts at collecting, analyzing and disseminating relevant information.

h. Capacity building

Developed Countries, [in cooperation with the relevant United Nations bodies and international donors, and NGOs,] should/could mobilize technical and financial resources, and facilitate technical

cooperation to developing countries [and countries with economies in transition] to reinforce their technical, managerial, planning, administrative [and financial] capacities to develop, and implement efficient energy systems.

16. Means of Implementation

{The cross-sectoral issues which have a bearing on this programme area will be included under this section following their discussion, for the 4th session of the PrepCom.}

C. PROMOTING RENEWABLE ENERGY SOURCES

Basis for Action

17. The path to increased reliance on renewable, environmentally [safe and sound] energy systems must be pursued.

{Notes: This Programme Area will be further developed as the formal report of the United Nations Inter-governmental Committee on New and Renewable Sources of Energy becomes available by the 4th session of the PrepCom.}

Objectives

18. The long-term objective of this programme area is to implement an energy transition from the present polluting and wasteful energy patterns, to one increasingly relying on the application of environmentally sound, renewable energy systems [, which in the long-term should/could provide increased stability and security in energy supply].

19. To facilitate this, countries should/could [set objectives of, and] develop economic and other policies for increasing or keeping high the contribution of renewable energy sources to the supply mix. [Regional and global indicative goals should/could also be set, and national and international indices for reliance on renewable energy sources [applicable to developed countries] should/could be made available.] Countries should/could increase the amount of money devoted to research and development for energy systems using renewable sources. [The long-term objective is to reverse the present situation, where most money is spent in conventional energy systems.]

20. Activities

a. Increasing the Contribution of Renewables

Countries [particularly countries with high per capita energy consumption] should/could seek to increase the contribution of renewable sources of energy to the overall supply mix, on the basis of availability, and where justified on the basis of economic cost effectiveness and overall environmental costs.

b. Research Priorities on Renewables

[Developed] Countries, [as well as regional and international bodies,] should/could agree to review research priorities [to ensure, where appropriate substantially increased funding to][for] research and development on, and application of renewable sources of energy[, and promote research in developing countries], [as far as possible, research and development should be in the public domain, to facilitate transfer and diffusion of new technologies].

c. Increasing the Contribution of Biomass

Developed countries and international organizations should/could cooperate to increase the availability of capacity in developing countries [and countries with economies in transition] to produce

environmentally sound biomass-based fuels, such as fuelwood or methanol, and to promote alternatives, in order to foster development and minimize unsustainable environmental stress and health impacts from the combustion of biomass, recognizing that the issue of energy from biomass is not just a technical issue, but one involving managing local renewable resources in a sustainable manner.

d. Local Application of Renewables

Activities should be directed at the local applications and adaptation of viable (defined locally) renewable energy resources.

e. Education and Awareness

Education and awareness raising programmes concerning the benefits and applicability of renewable energy at the local, national, regional and international levels should/could be introduced or intensified.

f. Information

Countries, in cooperation with the relevant UN bodies, international and regional and sub-regional bodies, and NGOs, should/could give priority to strengthening their efforts at collecting, analyzing and disseminating relevant information.

g. Capacity building

Countries, in cooperation with the relevant United Nations bodies and international donors, and NGOs, should/could mobilize technical and financial resources, and facilitate technical cooperation to developing countries [and countries with economies in transition] to reinforce their technical, managerial, planning and administrative capacities to develop, and implement renewable energy systems.

21. Means of Implementation

{The cross-sectoral issues which have a bearing on this programme area will be included under this section following their discussion, for the 4th session of the PrepCom.}

D. PROMOTING ENVIRONMENTALLY SOUND TRANSPORT SYSTEMS

Basis for Action

22. There is need for a wide-ranging [review of existing transport systems][response], involving vehicle emissions and fuel efficiency, the reorientation and management of traffic and transport systems, and infrastructural issues including land use and urban planning. Special attention should/could be given to public transport (mass transit)[and to means of transport based on low emission energy sources].

Objectives

23. The general objective is to implement measures [particularly in developed countries] to limit further harmful atmospheric emissions from the transport sector, covering road, rail and air transport systems, thereby contributing to the international response to the threat of climate change, as well as reducing local and regional air pollution, taking into account the specific local and national circumstances.

24. An immediate objective is to ensure that developing countries are assisted to develop further their transportation systems to support economic development efforts, in environmentally sound ways[, through the provision of funding for the incremental costs].

25. Special attention should be given to urban and metropolitan areas, where transport produces the majority of atmospheric emissions.

26. Activities

Many of the actions in the Programme Areas for the Energy Transition, Energy Efficiency, and Renewable Energy are relevant here. Options include the use of standards, economic instruments, information and awareness raising programmes.

[a. UN Conference on Sustainable Transport Systems

The United Nations should study the feasibility of convening and the scope of an international conference on transport and the environment. Such a conference could involve governmental representation, relevant international organizations, as well as the private sector, such as automobile manufactures.][The United Nations could initiate the preparation of an international conference on transport and the environment, which could be held in 1994 or 1995. The Conference could also involve the automobile manufacturers with a view to agreements on long-term improvements of fuel performance and emission standards.]]

b. Fuel Performance & Emission Standards

[Developed] Countries and the [EC][regional integration organizations] should/could strengthen existing and/or create new national fuel performance and emission standards[, to be coordinated regionally or globally, as appropriate] [, and to be compatible with internationally accepted criteria and norms].

c. Use of Economic Incentives

[[Developed] Countries and the [EC][regional integration organizations] should/could introduce economic mechanisms, including pricing which discourage large fuel-consuming and polluting vehicles and encourage [environmentally sustainable transportation systems][alternative fuels and less polluting transportation means]. In particular, they should/could seek to remove possible policy distortions that lead to unsustainable transport systems, and tend to ensure, to the extent possible that transport providers bear the marginal costs associated with the transport, including the social and environmental costs.]

d. Promotion of Mass Transit

Countries should/could review the means at their disposal to promote more efficient and less polluting mass transit, and[, where financially feasible] prepare appropriate plans to implement these, including through the removal of existing policy distortions.

e. Education and Awareness

Education and awareness raising programmes concerning transport and the environment at the local, national, regional and international levels should/could be introduced or intensified.

f. Information

Countries, in cooperation with the relevant UN bodies, international and regional and sub-regional bodies, and NGOs, should/could give priority to strengthening their efforts at collecting, analyzing and disseminating relevant information.

g. Capacity building

Countries, in cooperation with the relevant United Nations bodies and international donors, and NGOs, should/could mobilize technical and financial resources, and facilitate technical cooperation to developing countries [and countries with economies in transition] to

reinforce their technical, managerial, planning and administrative capacities to develop, and implement sustainable transport systems.

27. Means of Implementation

{The cross-sectoral issues which have a bearing on this programme area will be included under this section following their discussion, for the 4th session of the PrepCom.}

{Note: The following sections have not been discussed at the third session of the PrepCom, and consequently the whole text from here to the end is in square brackets.}

[E. PROMOTING INDUSTRIAL DEVELOPMENT THAT DOES NOT ADVERSELY IMPACT THE ATMOSPHERE

{Note: This section is to be developed by the 4th Session of the PrepCom}

F. PROMOTING SUSTAINABLE CONSUMPTION PATTERNS AND LIFE STYLES

{Note:

Energy Consumption Patterns and Life Styles, while crucial in the energy sector, is equally important in all the other economic sectors, such as in Agriculture, Industry, Forests, etc., and consequently also needs to be dealt with at those levels.}

Basis for Action

28. Most of the atmosphere-related environmental problems stem from an overuse of energy by the affluent. This is reflected by the wide variations in per capita energy consumption levels between countries with comparable levels of income, as well as between different socio-economic sectors within countries. There is an urgent need to promote sustainable life styles and energy consumption patterns.

29. At the same time, basic energy service requirements of a majority of the world's population are not being met. There must now be a concerted effort to provide all inhabitants of this planet, on an equitable basis, with sufficient energy services for sustainable development.

Objectives

30. [Developed] Countries should/could develop [Sufficient][Maximum] Energy Service Requirements, develop plans, incentives, and other means at their disposal to [manage][restrict] energy consumption accordingly.

31. Developing countries should/could accelerate efforts to provide adequate energy services to all their citizens, to ensure sustainable development and decent livelihoods.

32. Activities

a. [Managing][Restricting] Energy Consumption

[Developed] Countries should/could promote sustainable life-styles in all areas of energy consumption, inter alia, through research and study of possible economies and by incorporating global environmental costs into energy prices.

b. Studies on Energy Use and Sustainable Development

Relevant UN bodies should/could conduct and encourage studies on sustainable life-styles in relation to energy consumption, including studies on [Maximum][Sufficient] Energy Service Requirements.

c. Indicators of Energy Service Requirements

Countries, especially the developing countries should/could develop indicators for Basic Energy Service Requirements, make them an integral part of conditions for sustainable livelihoods, and develop plans for everybody to have access to these. Countries should/could also develop indicators for Sufficient Energy Service Requirements, and develop plans to not go beyond these. These indicators are to be used for domestic purposes only, as their inter-country comparison may be meaningless.

d. Consumption Patterns

In addition to energy efficiency measures, countries could promote less energy intensive life styles and economic activities, to ensure that energy efficiency gains are not offset by increased activities.

e. Promotion of Waste Minimization

[Developed] Countries and the [EC][regional integration organizations] should/could support initiatives promoting clean technologies, waste minimization and recycling with a view to reducing pollution, including greenhouse gas emissions.

f. Global Ceiling on Per Capita Energy Consumption

Negotiations should/could be held in the appropriate UN forum to conclude a global agreement fixing a mutually agreed common ceiling on per capita energy consumption/ carbon dioxide emissions therefrom, applicable uniformly to all countries.

33. Means of Implementation

(The cross-sectoral issues which have a bearing on this programme area will be included under this section following their discussion, for the 4th session of the PrepCom.)

G. ADDRESSING THE UNCERTAINTIES: ATMOSPHERE

Basis for action

34. Substantial knowledge of the environmental and development issues related to the atmosphere has been gained through international cooperation and exchange of data and information to all nations. However, concern with climate change, air pollution, and ozone depletion has created new demands for scientific and economic information. Better understanding of physical, chemical and biological properties of the affected ecosystems, as well as health impacts are needed, through expanded and strengthened research programmes, through comprehensive observing systems to detect trends, variations and changes in these ecosystems in a timely manner. Better understanding of the economic, social and political implications of changes, of the effects of these changes, and of possible response to those changes are also needed.

Objectives

35. Countries and the [EC][regional integration organizations] should/could agree to promote cooperation in conducting research to improve the understanding of the physical, chemical, biological, economic and social processes that influence and are influenced by the Earth's atmosphere global, regional and local scales.

36. Countries should/could agree to promote developing and maintaining systematic observations of ecosystems as well as health impacts affected by human activities in the energy, industry and transport sectors, and to exchange these data and information to the fullest extent possible.

37. Countries and regional economic integration organizations, in cooperation with intergovernmental and international organizations, should/could cooperate with developing countries and with economies in transition in building their capacity to conduct this research and data collection, and to participate in the exchange of the resulting information.

38. Activities

a. Identification of Priority Research Areas

The relevant United Nations bodies, in cooperation with Governments, industry, research institutions, and NGOs and within the framework of existing research programmes, such as the WCRP and the IGBP should/could identify priority areas of scientific, technical, and socio-economic research related to the critical linkages between the environmental and development issues arising in the energy, transport and industry sectors, as they relate to the atmosphere.

b. Information Sharing

Countries should/could promote the full and open exchange of data and information.

c. Early Detection Systems

The relevant United Nations bodies, in cooperation with countries and NGOs should/could promote cooperation in the development of early detecting systems concerning changes in the atmosphere, resulting from impacts from energy, industry and transport.

39. Means of Implementation

{The cross-sectoral issues which have a bearing on this programme area will be included under this section following their discussion, for the 4th session of the PrepCom.}]

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end